What is claimed is:

1. A method of inspecting defects, comprising:

a step of assigning an inspection recipe;

a step of inspecting a sample using the inspection recipe assigned; and

a step of outputting results of the inspection;

wherein said step of assigning an inspection recipe further includes:

an image signal acquisition step in which images of a sample are each sequentially acquired under a plurality of sets of image acquisition conditions differing from each other and a plurality of image signals each different in image acquisition conditions are acquired;

a defect detection step in which, from each of the plurality of image signals sequentially acquired under different sets of image acquisition conditions in said image signal acquisition step, defect candidates are detected for each of the plurality of sets of image acquisition conditions, and position information of the defect candidates detected is acquired;

an OR file-creating step in which, on the basis of position information of the defect candidates detected under each of the plurality of sets of image acquisition conditions in said defect detection step, an OR file of

defect candidates is created for each of the plurality of sets of image acquisition conditions; and

a reviewing step in which, on the basis of the OR file of defect candidates that was created for each of the plurality of sets of image acquisition conditions in said OR file-creating step, the same defect candidate is reviewed only one time.

2. The inspection method according to claim 1, wherein:

in said defect detection step, on the basis of assigned inspection conditions, defect candidates for each of said image acquisition signals are each detected from the image signals sequentially acquired therefrom.

3. The inspection method according to claim 1, wherein:

in said defect detection step, said image signal acquisition step, said defect detection step, and said classification step are each repeated a plurality of times under the same image acquisition conditions.

4. A method of inspecting defects, comprising:

a step of assigning an inspection recipe;

a step of inspecting a sample using the inspection recipe assigned; and

a step of outputting results of the inspection;

wherein said step of assigning an inspection recipe

further includes:

an image signal acquisition step in which images of a sample are each sequentially acquired under a plurality of sets of image acquisition conditions differing from each other and a plurality of image signals each different in image acquisition conditions are acquired;

a defect detection step in which, from each of the plurality of image signals sequentially acquired under different sets of image acquisition conditions in said image signal acquisition step, defect candidates are detected for each of the plurality of sets of image acquisition conditions, and position information of the defect candidates detected is acquired;

an OR file-creating step in which, on the basis of position information of the defect candidates detected under each of the plurality of sets of image acquisition conditions in said defect detection step, an OR file of defect candidates is created for each of the plurality of sets of image acquisition conditions;

a classification step in which, on the basis of the OR file of defect candidates that was created for each of the plurality of sets of image acquisition conditions in said OR file-creating step, defect candidates for each of the plurality of sets of image acquisition conditions are each classified into different types without the same defect

candidate being repeatedly classified; and

a selection step in which, on the basis of the classification results obtained for each of the plurality of sets of image acquisition conditions in said classification step, image acquisition conditions are selected and assigned as an inspection recipe in said defect inspection tool in accordance with conditions selection criteria.

5. The method of inspecting defects, according to claim 4, wherein:

in said defect detection step, on the basis of assigned inspection conditions, defect candidates for each of said sets of image acquisition conditions are each detected from the image signals sequentially acquired thereunder.

6. The method of inspecting defects, according to claim 4, wherein:

in said classification step, the classification of the defect candidates for each of said sets of image acquisition conditions is performed on the basis of reviewing.

7. The method of inspecting defects, according to claim 4, wherein:

in said classification step, the classification of the defect candidates for each of said sets of image acquisition conditions is performed by analyzing a

distribution of occurrence of defects on the sample.

8. The method of inspecting defects, according to claim 4, wherein:

in said classification step, the classification of the defect candidates for each of said sets of image acquisition conditions is performed by judging whether a particular defect is a killer defect or a non-killer defect.

9. The method of inspecting defects, according to in claim 4, wherein:

in said classification step, the classification of the defect candidates for each of said sets of image acquisition conditions is performed using results of defect component analysis.

10. The method of inspecting defects, according to claim 9, wherein:

in said selection step, a criterion that assigns priority to a particular category during the classification of defects is provided as part of said conditions selection criteria.

11. The method of inspecting defects, according to claim 4, wherein said step of assigning an inspection recipe further includes a step of displaying on a screen as a defect map the classification results obtained during classification in said classification step.

12. The method of inspecting defects, according to

claim 4, further comprising the step of presenting a review-sampling rate according to a category of defects classified in said classification step.

13. The method of inspecting defects, according to claim 4, wherein:

in said step of assigning an inspection recipe, said image signal acquisition step, said defect detection step, and said classification step are repeated a plurality of times under the same image acquisition conditions.

14. A method of inspecting defects, comprising:

a step of assigning an inspection recipe;

a step of inspecting a sample using the inspection recipe assigned; and

a step of outputting results of the inspection;

wherein said step of assigning an inspection recipe further includes:

an image signal acquisition step in which images of a sample are each sequentially acquired under a plurality of sets of image acquisition conditions differing from each other and a plurality of image signals each different in image acquisition conditions are acquired;

a defect detection step in which, from each of the plurality of image signals sequentially acquired under different sets of image acquisition conditions in said image signal acquisition step, defect candidates are detected for

each of the plurality of sets of image acquisition conditions, and position information of the defect candidates detected is acquired;

an OR file-creating step in which, on the basis of position information of the defect candidates detected under each of the plurality of sets of image acquisition conditions in said defect detection step, an OR file of defect candidates is created for each of the plurality of sets of image acquisition conditions;

a classification step in which, on the basis of the OR file of defect candidates that was created for each of the plurality of sets of image acquisition conditions in said OR file-creating step, defect candidates for each of the plurality of sets of image acquisition conditions are each classified into different types without the same defect candidate being repeatedly classified; and

a selection step in which, on the basis of the classification results obtained for each of the plurality of sets of image acquisition conditions in said classification step, image acquisition conditions are selected and assigned as an inspection recipe in said defect inspection tool in accordance with conditions selection criteria.

15. The inspection method according to claim 14, wherein:

in said selection step, at least a criterion that

assigns priority to sensitivity, and a criterion that minimizes false defects are provided as part of said conditions selection criteria.

16. The inspection method according to claim 14, wherein said classification step includes judging whether a defect candidate for each of said sets of image acquisition conditions is a killer defect or a non-killer defect.

17. The inspection method according to claim 14, wherein the classification results obtained during classification in said classification step are further displayed on a screen.

18. The inspection method according to claim 14, further comprising the step of presenting a review-sampling rate according to a category of defects classified in said classification step.

19. The inspection method according to claim 14, wherein:

in said step of assigning an inspection recipe, said image signal acquisition step, said defect detection step, and said classification step are repeated a plurality of times under the same image acquisition conditions.

20. A method of inspecting defects, comprising:

a step of assigning an inspection recipe;

a step of inspecting a sample using the inspection recipe assigned; and

a step of outputting results of the inspection;

wherein said step of assigning an inspection recipe further includes:

an image signal acquisition step in which, in a defect inspection tool, an image signal is acquired from a required sample;

a defect detection step in which, from the image signal acquired in said image signal acquisition step, defect candidates are each detected on the basis of desired inspection conditions;

a classification step in which the defects candidate detected in said defect detection step are classified into different types; and

a selection step in which, on the basis of the classification results obtained in said classification step, inspection conditions are selected or adjusted and assigned as an inspection recipe for the defect inspection tool in accordance with conditions selection criteria.

21. The inspection method according to claim 14, wherein:

in said classification step, the detected defect candidates are classified into at least real defects and false defects.

22. A method of inspecting defects, comprising:

a step of assigning an inspection recipe;

a step of inspecting a sample using the inspection recipe assigned; and

a step of outputting results of the inspection;

wherein said step of assigning an inspection recipe further includes:

an image signal acquisition step in which, in a defect inspection tool, by varying a plurality of sets of image acquisition conditions differing from each other, image signals for each of said sets of image acquisition conditions are sequentially acquired from a required sample;

a step in which the image signals sequentially acquired under each set of image acquisition conditions in said image signal acquisition step each are displayed with respective evaluation indexes on a screen; and

a step in which inspection conditions are assigned on the screen presenting the plurality of images and respective evaluation indexes in said display step.

23. The inspection method according to step 22, wherein the plurality of images and respective indexes for evaluating each of the plurality of images are displayed in a list format.

24. The inspection method according to step 22, wherein the indexes for evaluating an image of a substrate surface are a plurality of kinds of indexes.

25. A method of inspecting defects, comprising:

a step of assigning an inspection recipe;

a step of inspecting a sample using the inspection recipe assigned; and

a step of outputting results of the inspection;

wherein said step of assigning an inspection recipe further includes:

an image signal acquisition step in which, in a defect inspection tool, by varying a plurality of sets of image acquisition conditions differing from each other, image signals for each of said sets of image acquisition conditions are sequentially acquired from a required sample;

a storing step in which the plurality of images acquired in said image signal acquisition step, each image being different in image acquisition conditions, are stored in a form associated with information of the image acquisition conditions;

a step in which image acquisition conditions are determined on the basis of the plurality of images acquired in said image signal acquisition step in a form associated with information of the image acquisition conditions, each image being different in image acquisition conditions;

a step in which images associated with the image acquisition conditions that were determined from the stored images are each processed by varying inspection conditions; and

a step in which processing results on the images associated with inspection conditions and obtained by varying these inspection conditions are displayed on a screen, whereby inspection conditions are newly assigned using information of the image-processing results displayed on the screen.

26. The inspection method according to claim 25, wherein processing results on the images associated with the inspection conditions displayed on the screen and obtained by varying the inspection conditions include a graphical representation of indexes which denote attributes of each image.